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EXAMINER

VU, THONG H

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 02/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/072,075

Applicant(s)

DARNELL ET AL.

Examiner

Thong H Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

1. Claims 1-36 are pending.

Response to Arguments

2. Applicant's arguments filed 12/13/04 have been fully considered but they are not persuasive to overcome the prior art.

Rejection 102:

a.Claim1, applicant argues the prior art does not teach or suggest the type of frame.

Examiner points out the prior art taught the type of packet [Dighe, col 21 lines 65]. Examiner interpreted the frame type/size as packet type/size [see application Fig 2]

b.Claim 7, applicant argues the prior art does not teach or suggest the maximum size o f the first packet and the second maximum size of the second packet .

Examiner points out the prior art taught the BYTE (5) includes bit position SIZE (0) through SIZE (7) [Dighe, col 7 lines 62-67]; the packet length field (SIZE) the packet length greater than zero field (SGZ) [Dighe col 12 lines 15-50]. It was clearly the maximum size of the first and second packet is a design choice form 0-7.

Thus the rejection is sustained.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

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patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-36 are rejected under the judicially created doctrine of double patenting over claims 1-18 of U. S. Patent No. 6,381,647 B1 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows:

(Patent '647, claim1). An apparatus for initiating transmission of a plurality of frames in a network having a plurality of nodes serially interconnected in a loop topology, each frame identified by one of a plurality of type designations, the apparatus comprising:

- a schedule memory storing:
- a timer value for each frame type indicating a window for transmission of a frame type,

- a delta time indicating the frequency of transmission of a frame type;

- a sequence size for each frame type;

- a list of frames to be transmitted for each frame type; and

- a sequencer operable to search for available bandwidth during a sample window and access the schedule memory to initiate transmission of one or more of the frames in the list based on sequence size and available bandwidth.

(Application, claim 1) a method for communicating information in a network having a plurality of nodes, comprising:

- providing a frame for storing

- information, the frame identified by a frame type;

- determining the frame type of the frame;

- in response to determining the frame type, scheduling periodic transmission of the frame from a node in the network; and

- transmitting the frame at the scheduled time.

Thus, It was obvious both invention discloses a technique of transmit a packet/frame type via network based on a schedule time.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3,5-13,15-24,26-36 are rejected under 35 U.S.C. § 102(b) as being anticipated by Dighe et al [Dige, 4,979,165].
5. As per claim 1, Dighe discloses a method for communicating information in a network having a plurality of nodes [Dighe, network nodes, col 3 lines 1-15], comprising:
 - providing a frame for storing information, the frame identified by a frame type;
 - determining the frame type of the frame [Dighe, the type of packet field, col 7 lines 25-60];
 - in response to determining the frame type, scheduling periodic transmission of the frame from a node in the network [Dighe, scheduled for services, col 19 line 7-col 20 line 2]; and

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transmitting the frame at the scheduled time [Dighe, scheduled time of service, packet to be transmitted, col 16 line 63-col 19 line 5; col 21 line 44-col 22 line 15].

6. As per claim 2, Dighe discloses determining the frame type further comprises determining the maximum size of the frame [Dighe, SIZE (0) through SIZE (7), col 7 lines 62-67];

7. As per claim 3, Dighe discloses determining the frame type further comprises determining the rate of transmission of the frame [Dighe, maximum transmission rate, col 5 lines 7-37].

8. As per claim 5, Dighe discloses determining the maximum size of the frame comprises reading the maximum size of the frame from a list, the list storing possible frame types and the maximum size of each possible frame type [Dighe, SIZE (0) through SIZE (7), col 7 lines 62-67; any desired rate, DS0, DS1, DS3, col 3 lines 1-15].

9. As per claim 6, Dighe discloses determining the rate of transmission of the frame comprises reading the rate of transmission of the frame from a list, the list storing possible frame types [Dighe, the type of packet field, col 7 lines 25-60] and the rate of transmission of each possible frame type [Dighe, maximum transmission rate, col 5 lines 7-37].

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10. As per claim 7, Dighe discloses a method for communicating information in a network having a plurality of nodes, comprising:

providing a first frame for storing information, the frame having a first maximum size [Dighe, SIZE (0) through SIZE (7), col 7 lines 62-67; fixed length, col 6 lines 29-66];

providing a second frame for storing information, the frame having a second maximum size, the first size being unequal to the second size [Dighe, SIZE (0) through SIZE (7), col 7 lines 62-67; variable length, col 6 lines 29-66];

determining the first maximum size and the second maximum size [Dighe, SIZE (0) through SIZE (7), col 7 lines 62-67; fixed length and variable length, col 6 lines 29-66];

response to determining the first maximum size and the second maximum size, scheduling periodic transmission of the first and second frames beginning at respective first and second scheduled times [Dighe, scheduled time of service, the periodic packet, col 16 line 63-col 19 line 5; col 21 line 44-col 22 line 15];

transmitting the first frame at the first scheduled time [Dighe, statistical packets, col 18 lines 14-col 19 line 6]; and

transmitting the second frame at the second scheduled time [Dighe, periodic packets, col 18 lines 14-col 19 line 6].

11. As per claim 8, Dighe discloses the first frame has a first frame type and the second frame has a second frame type [Dighe, the type of packet field, col 7 lines 25-60] and determining the first maximum size and the second maximum size comprises

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comparing the first and second frame types to a predefined set of frame types [Dighe, fixed length and variable length, col 6 lines 29-66].

12. As per claim 9, Dighe discloses determining the first and second rates and wherein scheduling periodic transmission of the first and second frames further comprises scheduling periodic transmission in response to determining the first and second rates [Dighe, scheduled of service with fixed length and variable length, col 6 lines 29-66; scheduler and periodic, col 15 line 50-col 16 line 54].

13. As per claim 10, Dighe discloses the first frame has a first frame type and the second frame has a second frame type and determining the first and second rates comprises comparing the first and second frame types predefined set of frame types [Dighe, compares them to the first and second check bits, col 13 line 14-col 14 line 50].

14. As per claim 11, Dighe discloses a method for communicating information in a network having a plurality of nodes, comprising:

providing a first frame for storing information and second frame for storing information [Dighe, the type of packet field, col 7 lines 25-60];

repeatedly transmitting the first frame plurality of nodes in the network at a first rate [Dighe, fixed length and variable length, col 6 lines 29-66]; and

repeatedly transmitting the second frame to a plurality of nodes in the network at a second rate, the first rate being unequal to the second rate [Dighe, fixed length and variable length, col 6 lines 29-66].

15. As per claim 12, Dighe discloses providing a third frame for storing information, and transmitting the third frame to a plurality of nodes the network only when the repeated transmission of the first and second frames at the first and second rates leaves available bandwidth for transmission of the third frame [Dighe, any desired rate, DS0, DS1, DS3, col 3 lines 1-15].

16. As per claim 13, Dighe discloses repeatedly transmitting the first frame at first rate comprises transmitting the first frame at a rate specified in a list stored in memory [Dighe, any desired rate, DS0, DS1, DS3, col 3 lines 1-15].

17. As per claim 15, Dighe discloses a method for initiating transmission of sequence of related data frames in a network having a plurality of nodes serially interconnected in a loop topology, each frame identified by one of a plurality type designations [Dighe, the network configuration is a ring, col 5 lines 38-45] comprising:

building a transmission queue for frames of each designated type, the queue organized by frame type [Dighe, type field, col 7 lines 25-60] and containing pointers to the header of each sequence of frames [Dighe, header with information word, col 6 lines 29-66; indicator, col 7 lines 62-67];

building a transmission schedule table for transmission times for sequences of frames of each designated type [Dighe, scheduler, scheduled time of service, col 16 line 63-col 19 line 5]; and

transmitting in response to the transmission schedule table a sequence of frames of a first designated type to each of the serially interconnected nodes of the network when an entry exists for a given designated type of frame [Dighe, scheduler with timing sequence, col 5 lines 7-37; col 20 lines 3-col 21 line 5, 44-col 22 line 15].

18. As per claim 16, Dighe discloses determining availability of the serially interconnected nodes of the network for transmission of data frames of a given designated type [Dighe, designated type, col 7 lines 25-60].

19. As per claim 17, Dighe discloses determining availability of the nodes of the network for transmission of data frames of a second designated type upon completion of transmission of data frame of a selected designated type [Dighe, designated type, col 7 lines 25-60].

20. As per claim 18, Dighe discloses storing frames of data by frame type for later transmission to the plurality of serially interconnected nodes [Dighe, designated type, col 7 lines 25-60].

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21. As per claim 19, Dighe discloses building a transmission queue further comprises building a queue for isochronous frame types [Dighe, voice, col 7 lines 25-60] and building a queue asynchronous frame types [Dighe, asynchronous, col 5 lines 7-37].

22. As per claim 20, Dighe discloses transmitting a sequence of frames of a second type to each of the plurality of serially interconnected nodes during a sample window based on available bandwidth [Dighe, available bandwidth, col 21 lines 1-5].

23. As per claim 21, Dighe discloses transmitting a sequence of frames of additional designated types at a frame type start time for each additional frame type at a predetermined rate during an allocated portion of a sample window for each of the additional frame types as inherent feature of packet type.

24. Claims 22-24,26-27; 28-31;32-33;34-36 contain the similar limitations set forth of claims 15-21. Therefore, claims 22-24,26-36 are rejected for the similar rationale set forth in claims 15-21.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. Claims 4,14,25 are rejected under 35 U.S.C. § 103 as being unpatentable over Dighe et al [Dige, 4,979,165] in view of Kilkki [6,163,808].

26. As per claim 4, Dighe discloses the packet type and schedule time. However Dighe does not detail scheduling transmission of the frame comparing a frame priority to the priority of a plurality of additional frames.

A skilled artisan would have motivation to improve the schedule on Dighe's apparatus and found Kilkki teaching. Kilkki discloses a communication system with a scheduling unit transferred cell depending on cell type and cell priority values [Kilkki, abstract]

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the scheduling unit transferred cell depending on cell type and cell priority values as taught by Kilkki into the Dighe's apparatus in order to utilize the scheduler. Doing so would provide a effective coordinated management of network traffic between the real-time (isochronous and non-real-time (asynchronous) packet.

27. Claims 14,25 contain the similar limitations set forth of claim 4. Therefore, claims 14,25 are rejected for the similar rationale set forth in claim 4.

28. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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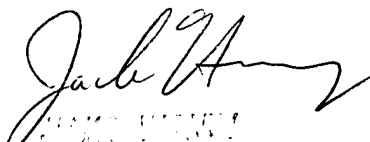
mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Thong Vu, whose telephone number is (571)-272-3904. The examiner can normally be reached on Monday-Thursday from 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Jack Harvey*, can be reached at (571) 272-3896. The fax number for the organization where this application or proceeding is assigned is 703-872-9306

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval IPAIRI system. Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thong Vu
Patent Examiner
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JACK HARVEY
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